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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/686,086	10/15/2003	Robin Montague Mathews	100.615US01	6824
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FOGG & POWERS LLC 10 SOUTH FIFTH STREET SUITE 1000 MINNEAPOLIS, MN 55402			EXAMINER SHAHRIAR, CHOWDHURY	
			ART UNIT 2609	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/686,086

Applicant(s)

MATHEWS ET AL.

Examiner

Chowdhury M. Shahriar

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/15/2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04/04/02 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

(e) The invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. **Claims 1-10, 14-16 and 18-28** are rejected under 35 U.S.C. 102(e) as being anticipated by US 2003/0061505 A1 to *Sperry*.

As to **claim 1**, *Sperry* discloses a method, comprising: when a packet is to be sent over a secured connection, determining if the secured connection is set up; when the secured connection is not set up, storing the packet; and after storing the packet, when the secure connection is set up, retrieving the packet and transmitting the packet over the secured connection. In one embodiment *Sperry* teaches that a secure network connection is used (FIG 1; page 2, paragraph 0024, and page 2, paragraph 0012) and check up the connection status whether it is secured or not and then establishes secure connection (page 8, paragraph 0076 and page 6, paragraph 0061), the packet is stored in the "queue" (page 8, paragraph 0076). Packet is transmitted only after the establishment of secure connection (page 8, paragraph 0076 and page 6, paragraph 0062).

As to **claim 2**, *Sperry* discloses wherein the secured connection is an Internet protocol security protocol connection. In (page 3, paragraph 0028 and page 2, paragraph 0014), *Sperry* teaches that IPSEC was used as to demonstrate the said method and system for security scanning network traffic.

As to **claim 3**, *Sperry* discloses wherein the secured connection is set up when a security association associated with the secured connection is set up. In (page 3, paragraph 0029), *Sperry* teaches IKE a type of security association (SA) is associated with the secure connection (page 6, paragraph 0061).

As to **claim 4**, *Sperry* discloses wherein when the secured connection is not set up, setting up the secured connection. In (page 8, paragraph 0076 and page 6, paragraph 0061), *Sperry* teaches that SA is established when no connection is found.

As to **claim 5**, *Sperry* discloses wherein setting up the secured connection includes negotiating a security association associated with the secure connection. A method for negotiating a security association (SA) associated with the secure connections is mentioned in (page 6, paragraph 0060, 0061 and page 7, paragraph 0063).

As to **claim 6**, *Sperry* discloses wherein negotiation the security association includes negotiating the security association using the Internet key exchange protocol (IKE). A method for negotiating a security association (SA) associated with the secure connections using IKE is mentioned in (page 6, paragraph 0060 and 0061).

As to **claim 7**, *Sperry* discloses wherein a system, comprising: a networking subsystem; a security subsystem; a negotiation subsystem; and a packet store; wherein when the networking subsystem generates a packet that is to be transmitted over a secure connection, the networking subsystem determines if the secure connection is setup; when the secure connection is set up, the networking subsystem signals the negotiation subsystem to set up the secure connection and stores the packet in the packet store; and after storing the packet, the security subsystem periodically determines whether the secure connection is set up and, when the security subsystem determines that the secure connection is set up, the packet is retrieved from the packet store and the security subsystem transforms the packet and transmits the packet over the secure connection. For response to this claim, please look at **claims 1,3,4, and 5** mentioned above.

As to **claim 8**, *Sperry* discloses wherein the networking subsystem stores the packet in a queue. In (page 8, paragraph 0076) *Sperry* teaches about queue up packet.

As to **claim 9**, *Sperry* discloses wherein when the networking subsystem determines that storing the packet would violate a constraint related to the storage of the packet, the networking subsystem does not store the packet and wherein when the networking subsystem determines that storing the packet would not violate a constraint related to the storage of the packet, the networking subsystem stores the packet. In (page 8, paragraph 0076) *Sperry*

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teaches that Master IPsec Engine does check the status and rules for storing packets and it also executes the rule of releasing the packets.

As to **claim 10**, *Sperry* discloses wherein the system of claim 9, wherein when the networking subsystem determines that storing the packet would violate a constraint related to the storage of the packet, the networking subsystem does not store the packet and wherein when the networking subsystem determines that storing the packet would not violate a constraint related to the storage of the packet, the networking subsystem stores the packet. For response to this claim, please look at **claim 9** mentioned above.

As to **claim 14**, *Sperry* discloses wherein a timer that determines when the security subsystem periodically determines whether the secure association exists for the Internet protocol security protocol connection. In his invention, *Sperry* teaches that the IPsec security key materials may be refreshed from time to time to prevent security compromise. The frequency of refresh depends, in part, on the strength of the algorithm, the amount of data that has employed the current IPsec security association, and the like (page 7, paragraph 0063).

As to **claim 15**, *Sperry* discloses wherein a system, comprising: a networking subsystem; an internet protocol security protocol subsystem; an internet key exchange subsystem; and a packet store; wherein when the networking subsystem generates a packet that is to be transmitted over an internet protocol security protocol connection, the networking subsystem determines if a security association associated with the internet protocol security protocol connection exists; when the security association does not exist, the

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networking subsystem signals the internet key exchange subsystem to negotiate the security association and stores the packet in the packet store; and after storing the packet, the internet protocol security protocol subsystem periodically determines whether the security association exists for the internet protocol security protocol connection and, when the internet protocol security protocol subsystem determines that the security association exists for the internet protocol security protocol connection, the packet is retrieved from the packet store and the internet protocol security protocol subsystem transforms the packet and transmits the packet over the internet protocol security protocol connection in accordance with the internet protocol security protocol. For response to this claim, please look at **claim 1, 2, 6, and 14** mentioned above.

As to **claim 16**, *Sperry* discloses wherein the system of claim 15, wherein the Internet protocol security protocol subsystem determines whether the security association exists for the Internet protocol security protocol connection after successive periodic intervals elapse. For response to this claim, please look at **claim 14** mentioned above.

As to **claim 18**, *Sperry* discloses wherein programmable-processor readable medium on which program instructions are stored, wherein the program instructions are operable to cause a programmable processor to: when a packet is to be sent over a secured connection, determine if the secured connection is set up; when the secured connection is not set up, store the packet; and after storing the packet, when the secure connection is set up, retrieve the packet and transmitting the packet over the secured connection. In

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(FIG. 3 and page 3, paragraph 0044) *Sperry* teaches about a programmable processor unit.

As to **claim 19**, please see similar rejection to claim 1. In addition, *Sperry* discloses a cable modem termination system. In (page 1, paragraph 0007) *Sperry* teaches remote access from remote computer 140 to facilities within private network 140 is accomplished via a relatively slow connection, such as a dial-up connection at about 56 Kbps, a DSL (digital subscriber line) connection at about 1 Mbits/sec or slower, or a cable modem connection at analogous speeds. Also note that the programmable processor is shown in (FIG.3, reference character 308).

As to **claim 20**, please see similar rejection to **claim 1** and **claim 19**. Also note that the programmable processor is shown in (FIG.3, reference character 308).

As to **claim 21**, please see similar rejection to **claim 1** and **claim 19**. In addition, the internal backplane interface (that communicates with backplane network) is discussed in (page 5, paragraph 0053).

As to **claim 22**, please see similar rejection to **claim 19**. In addition, the second network interface (that communicates with external network), is discussed in (page 5, paragraph 0053).

As to **claim 23**, please see similar rejection to **claim 19**. In addition, look at rejection to **claim 21** for black-plane interface.

As to **claim 24**, *Sperry* discloses a network interface module comprising external network interface (that communicates with external network), internal

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backplane interface (that communicates with backplane network) in (page 5, paragraph 0053 and FIG. 4, reference character 406 and 408). The programmable processor is shown in (FIG.3, reference character 308). In addition, please look at rejection to **claim 1** for response of a method comprising: when a packet is to be sent over a secured connection, determining if the secured connection is set up; when the secured connection is not set up, storing the packet; and after storing the packet, when the secure connection is set up, retrieving the packet and transmitting the packet over the secured connection.

As to **claim 25**, please see similar rejection to **claim 24**. In addition, Internet security set up negotiation is discussed in rejection to **claim 5** and the processor is shown in (FIG.3, reference character 308).

As to **claim 26**, please see similar rejection to **claim 24**. In addition, Internet key exchange protocol is discussed in rejection to **claim 6** and the processor is shown in (FIG.3, reference character 308).

As to **claim 27**, please see similar rejection to **claim 24**. In addition, *Sperry* discloses wherein the external network is a wide area network that includes the Internet. *Sperry* teaches that their invention is implemented in a wide area network (WAN) that includes Internet (FIG. 1; FIG. 2; page 3, paragraph 0028; page 1, paragraph 0003; page 1, paragraph 0004).

As to **claim 28**, please see similar rejection to **claim 24**. In addition, *Sperry* discloses wherein the external network is a wide area network that includes the Internet. *Sperry* teaches that their invention is implemented in a

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wide area network (WAN) that includes Internet (FIG. 1; FIG. 2; page 3, paragraph 0028; page 1, paragraph 0003; page 1, paragraph 0004).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 11** is rejected under 35 U.S.C. 103(a) as being unpatentable over US 2003/0061505 A1 to *Sperry* in view of U.S. Patent Pub. 2003/0067903 A1 to *Jorgensen et al.*

As to **claim 11**, *Sperry* discloses the limitations in the parent claim. *Sperry* does not expressly disclose the maximum packet storage time. *Jorgensen* discloses that excessive queuing can have detrimental effects on traffic by delaying time sensitive packets beyond their useful time frames and therefore, it is desired that queuing be used intelligently and sparingly, without introducing undue delay in delay-sensitive traffic such as real-time sessions (page 8, paragraph 0121). *Sperry* and *Jorgensen* are analogous art because they are from same type of art and they deal with same type of problem – appropriate time for storing data without hampering the flow of the network. At the time of invention, it would have been obvious to a person of ordinary skilled in the art to make the above modification. The suggestion/motivation would have been to

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queue the data for sufficient time without introducing undue delay in delay-sensitive traffic such as real-time sessions (page 8, paragraph 0121). Therefore, it would have been obvious to combine *Sperry* with *Jorgensen* to the time limit of system memory to store the packet.

5. **Claims 12 and 13** are rejected under 35 U.S.C. 103(a) as being unpatentable over US 2003/0061505 A1 to *Sperry* in view of U.S. Patent Pub. 2003/0023846 A1 to *Krishna et al.*

As to **claim 12**, *Sperry* discloses the limitations in the parent claim. *Sperry* does not expressly disclose the maximum packet storage limit that specifies the maximum number of packets to be stored. *Krishna* discloses that fixed-sized packet cells may be stored in payload or packet buffers and fetched in appropriate time by packet classifier (page 4, paragraph 0049). *Sperry* and *Krishna* are analogous art because they are from same type of art and they deal with same type of problem – a fixed size for data packet and packet buffer. At the time of invention, it would have been obvious to a person of ordinary skilled in the art to make the above modification. The suggestion/motivation would have been to stop data overflow. Therefore, it would have been obvious to combine *Sperry* with *Krishna* to the maximum packet storage limit that specifies the maximum number of packets to be stored.

As to **claim 13**, *Sperry* discloses the limitations in the parent claim. *Sperry* does not expressly disclose the maximum limit of system memory to store the packet. *Krishna* discloses that fixed-sized packet cells may be stored in payload or packet buffers and fetched in appropriate time by packet classifier (page 4,

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paragraph 0049 and page 2, paragraph 0023). *Sperry* and *Krishna* are analogous art because they are from same type of art and they deal with same type of problem - a fixed size for data packet and packet buffer. At the time of invention, it would have been obvious to a person of ordinary skilled in the art to make the above modification. The suggestion/motivation would have been to stop data overflow. Therefore, it would have been obvious to combine *Sperry* with *Krishna* to the maximum limit of system memory to store the packet.

6. **Claims 17** is rejected under 35 U.S.C. 103(a) as being unpatentable over US 2003/0061505 A1 to *Sperry* in view of U.S. Patent Pub. 2002/0083344 A1 to *Vairavan*.

As to **claim 17**, *Sperry* discloses the limitations in the parent claim. *Sperry* does not expressly disclose that the system of claim 16, wherein each periodic interval is 500 milliseconds. *Vairavan* discloses that every time new packet is found, the connection is checked (page 10, paragraph 0135). *Sperry* and *Vairavan* are analogous art because they are from same type of art and they deal with same type of problem – checking existence of connection at periodic interval. At the time of invention, it would have been obvious to a person of ordinary skilled in the art to make the above modification. The suggestion/motivation would have been to check existing connection at regular interval (page 10, paragraph 0135). Therefore, it would have been obvious to combine *Sperry* with *Vairavan* to check whether there is a connection available at regular interval.

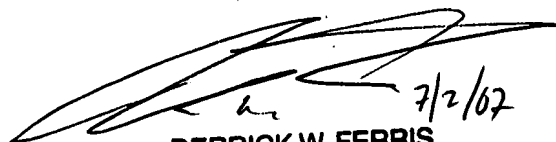
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chowdhury M. Shahriar whose telephone number is 571-270-3318. The examiner can normally be reached on Mon-Fri 8 AM-4 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derrick Ferris can be reached on 571-272-3123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Chowdhury M. Shahriar
Patent Examiner
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A handwritten signature in black ink, appearing to read "Derrick W. Ferris", with a date "7/2/02" written to its right.

DERRICK W. FERRIS
PRIMARY PATENT EXAMINER

CMS